US005528399A

United States Patent [19]

Izumi et al.

[11] Patent Number: 5,528,399

[45] Date of Patent: Jun. 18, 1996

[54] **OPTICAL ADDRESS TYPE DISPLAY DEVICE WITH UNIFORMLY FUNCTIONING OPTICAL SWITCHING ELEMENTS EACH PROVIDED FOR EACH PIXEL**

[75] Inventors: **Yoshihiro Izumi**, Kashihara; **Sayuri Fujiwara**, Nara, both of Japan

[73] Assignee: **Sharp Kabushiki Kaisha**, Osaka, Japan

[21] Appl. No.: **146,487**

[22] Filed: **Oct. 29, 1993**

[30] **Foreign Application Priority Data**

Oct. 29, 1992 [JP] Japan 4-291806
Jan. 18, 1993 [JP] Japan 5-012929
Apr. 12, 1993 [JP] Japan 5-084611

[51] **Int. Cl.**[6] **G02F 1/135**

[52] **U.S. Cl.** **359/72**; 359/54; 385/901

[58] **Field of Search** 359/42, 48, 49, 359/50, 72, 54; 385/14, 16, 17, 18, 24, 31, 901, 129, 132, 131, 2, 3

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Primary Examiner—William L. Sikes
Assistant Examiner—Kenneth Parker
Attorney, Agent, or Firm—David G. Conlin; John L. Welch; Brian L. Michaelis

[57] **ABSTRACT**

A display device has an insulated basic substrate. A plurality of light waveguides are arranged on the basic substrate in parallel to each other. A plurality of signal wires is arranged in parallel and in a manner to be crossed with the light waveguides, respectively. A plurality of photoconductive layers three-dimensionally are laid between the light waveguides and the signal wires and directly connected with each light guiding portion of the light waveguides at respective crosspoints between the light waveguides and the signal electrodes. A plurality of pixel electrodes provided are to be connected with the photoconductive layers, respectively. An insulated opposed substrate located in opposition to the basic substrate with a display medium therebetween and having an opposed electrode on the surface opposed to the basic substrate. And the relation among an index of refraction n_1 of the light guiding portion, an index of refraction n_2 of the photoconductive layer, and an angle of incidence θ of light given from the light guiding portion to the photoconductive layer meeting the following expression of

$$n_1 \sin \theta < n_2 \quad (1)$$

6 Claims, 26 Drawing Sheets